STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: **Doe Berry C.H.** *Agreement #:* **30-076551**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:
   Northwest Region **Contact Person: Candace Johnson**
   919 North Township St. **Telephone: (360) 856-3500**
   Sedro-Woolley, WA 98284

4. Date checklist prepared: **8/27/04**

5. Agency requesting checklist: **DNR**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **5/23/05**
   b. *Planned contract end date (but may be extended):* **9/30/07**
   c. *Phasing:*

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. *Site preparation:* **Treatment needs will be assessed in 2-3 years.**
   b. *Regeneration Method:* **Hand plant conifer seedlings.**
   c. *Vegetation Management:* **Treatment needs will be assessed in 3-5 years.**
   d. *Thinning:* **Treatment will be assessed in 10-15 years.**

   Roads: **The MU-ML, MU-44, and CU-ML will be used for future forest management activities.**

   Rock Pits and/or Sale:
   The Helgramite Hard Rock Pit (MU-43HRP)
   on the MU-ML road located in the Section 16 in Township 34 North, Range 5 East, W.M. will be used for this proposal.
   Other: **None**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐*303 (d) – listed water body in WAU:* ☐*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Available at NW region office.**
☒*Wildlife report:* **Wildlife Biologist visit on 6/18/04. See report at NW region office.**
☐*Geotechnical report:*
☒*Other specialist report(s):* **Region Hydrologist/ soil scientist visit on 6/22/04.**
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **See road plan at NW region office**
☒*Other:* **Forest Resource Plan Environmental Impact Statement, July 1992; Final Habitat Conservation Plan, September 1997; State Soil Survey, 1992.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
None Known

10. List any government approvals or permits that will be needed for your proposal, if known.

☒*HPA* ☐*Burning permit* ☐*Shoreline permit* ☐*Incidental take permit* ☒*FPA #* _____ ☐*Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description:*
The Doe Berry Contract Harvest Timber Sale is a regeneration harvest comprised of two timber sale units. The Mundt Creek Mainline (MU-ML) and the Cultus Mountain Mainline (CM-ML), approximately 3 miles southeast of Clear Lake, access the sale. This proposal is located in section 16 of Township 34N, Range 5E W.M. The proposal area is bounded by private commercial timberland north of unit 1 but is otherwise bounded by state trust land. The sale is located within the Nookachamps WAU. No watershed analysis has been completed for this area. Timber associated with this proposal will be harvested using both cable yarding and ground-based methods.

Gross Acreage: The gross acreage (proposal area minus stream buffers but including leave tree areas) totals 89.7 acres (Unit 1 =45.4 ac; Unit 2= 44.3 ac).

Timber Sale Area: The timber sale area (gross acreage plus road R/W minus leave tree areas) as determined by GPS and hand-traverse survey totals 84.8 acres (Unit 1 =42.8 ac; Unit 2= 42 ac). This is also referred to as "net area" or "net harvest area" in this application.

Sale of timber:

Estimated Volume:	**5,159 MBF**
Total # of Units:	**2**
Area in Acres:	**89.7 gross acres, 84.8 net acres + .5 acre of Right of Way + 85.3 acres net.**
Type of Harvest:	**Regeneration**
Logging System:	**Cable & Ground based yarding.**
Landings:	**11**

Roads: This proposal includes approximately 2779 ft of new road construction and 5800 ft of reconstruction. The reconstruction will involve existing culvert cleanout, water bar removal and application of 3" minus ballast rock at the water bar locations.

Rock Pits and/or sales:
The following existing rock pit will be utilized in the future for timber sales, road maintenance and other forest management activities.
Hellgrammite hard rock pit (MU-43HRP), SW ¼, SW ¼, Section 16 Township 34 Range 5 East

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*

Pre-Harvest Stand Description: The proposal area contains stands approximately 70-80 years of age that originated after being logged in the 1930s. The forest type is generally mixed conifer. Snags and down woody material >12" in diameter are present throughout these stands.

The mixed conifer stands tend to be found on upland sites with well-drained soils. These stands have basal areas between 260-295 ft^2/acre, of which 20% is comprised of western hemlock (average DBH of 12-15"), 70% Douglas-fir (average DBH of 20-25"), and 8% western redcedar (average DBH of 10-20"). Of the remaining hardwood basal area, over 80% is red alder with big leaf maple and black cottonwood making up the remainder. Canopy heights in these stands range from 120 to150 feet. Understory vegetation is primarily composed of sword fern, huckleberry, and salmonberry.

The proposed sale is not within any reclassified or reclassified plus marbled murrelet habitat polygons. Of the large older remnant Douglas fir, field reconnaissance found few with branches large enough to act as platforms. The HCP Legacy Tree Procedure was used to protect unique wildlife trees and contract language written to ensure reasonable tree trading if marked trees block cable yarding or roads.

Overall Unit Objectives: Objectives for this proposal include generating revenue for State Forest Board – Common School, protecting water quality, maintaining site productivity, minimizing impacts to the I-5 and Hwy 9 viewsheds, and protecting/enhancing overall wildlife habitat through a tree retention strategy.
This proposal meets or exceeds all of the guidelines and prescriptions set forth in the DNR Habitat Conservation Plan, Forest Resource Plan, and Forest Practices Rules and Regulations.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		2779	1	
Reconstruction		5800		
Abandonment		2779	1	
Bridge Install/Replace	0			
Culvert Install/Replace (fish)	0			
Culvert Install/Replace (no fish)	8			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:
Section 16 and 21 of Township 34 North, Range 5 East, W.M.

b. Distance and direction from nearest town (include road names):
Approximately 3 miles southeast of Clearlake. Hwy 9 to Old Day Creek Rd, to Janicki Rd.

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

WAU Name	WAU Acres	Proposal Acres
Nookachamps	47,428	84.8
Sub-basin 6	4,321	84.8

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

The proposal is located in the Nookachamps WAU, Sub-basin 6 on the lower reaches of Cultus Mountain, south of Mundt Creek.

The Nookachamps WAU consists of residential, small forestland ownership, industrial timberland, and DNR managed land totaling 47,428 acres. DNR manages approximately 30% of the total WAU and 50% of Sub-basin 6. Less than 1% of the total WAU acreage will be affected by this proposal, approximately 2% of Sub-basin 6.

In Sub-basin 6 of the Nookachamps WAU, approximately 434 acres (10%) have been harvested on DNR managed lands in the last 7 years. An 87acre, DNR timber sale in sub basin 6 is proposed for the spring of 2005. 35 acres of this sale are in the Nookachamps WAU and the remaining acreage is in the Gilligan WAU to the north. Private land owners in the Nookachamps WAU have harvested approximately 4% of the total WAU acreage in the last seven years.

Within the Nookachamps WAU, 64% (8,948 acres) of DNR-managed land is currently forested with trees 25 years or older. An additional 5% (671 acres) of this land is forested with trees 20 years old. Scheduled DNR activities within the next three fiscal years (to be implemented over the next 5 years) include 1,160 acres of regeneration harvests and 360 acres of thinning harvests. Thus, in five years 60% (8,459 acres) of DNR-managed lands within the WAU will be forested with trees 25 years or older.

Future forest management activities in the WAU include road building, rock pit expansion, silvicultural work and timber harvesting. Activities occurring on DNR managed land will follow Forest Practices Rules, Habitat Conservation Plan (HCP) guidelines, and the Forest Resource Plan – policies designed to minimize environmental impacts. Future forest management activities on privately managed, non-DNR lands will be subject to the Forest Practice Rules.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☒Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).
The Nookachamps WAU consists of 47,428 acres of rolling foothills, occasional rock outcrops, mountainous terrain, and valley bottoms. The boundaries of the WAU follow the ridgeline created by Cultus Mountain west to Devil's Mountain. A low valley formed by the two mountains drains a series of lakes north into the Skagit River via the Nookachamps Creek. Cultus Mountain is the highest point of the WAU at 3,900 feet while the Nookachamps Creek valley is near sea level. The average slope of the WAU is 35-45% and the average rainfall is 43 inches.

Approximately 93 percent of DNR land in the Nookachamps WAU is forested. Timber types range from hardwood to conifer: with red alder, big leaf maple, and cottonwood hardwood stands, and Douglas-fir, western hemlock, and western redcedar conifer stands on the low to mid-elevations. The higher elevations in the WAU contain conifer stands generally comprised of pacific silver fir, western hemlock, and redcedar.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).
The proposal area is consistent with moderate slopes found throughout the WAU.

b. What is the steepest slope on the site (approximate percent slope)?
45%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture	% Slope	Acres	Mass Wasting Potential	Erosion Potential
7400	Gravelly silt loam	3-15	10	Insignificant	Low
8722	V. Gravelly loam	0-15	12	Insignificant	Low
8724	V. Gravelly loam	30-65	21	Medium	Medium
7439	V. Gravelly Silt Loam	30-65	42	Medium	Medium

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) *Surface indications:*
Several, post-glacial landslides have modified the terrain on much of the west side of Cultus Mountain. The old landslides are responsible for present-day topography, micro-landforms, stream course locations, and local slope stability and soil drainage conditions. The proposal is approximately ½ mi. northwest of an ancient landslide that created a 2000-foot wide scar that is still visible on the mountainside.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
See above B.1.d.1.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:
There is some evidence of small slope failures along some stream reaches in the WAU. These are generally associated with stream reaches in steep draws that have formed by cutting through dense glacial till.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*
Both timber sale units were located on stable landforms. Roads were designed in accordance with Forest Practice rules.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **1** *Approx. acreage new landings:* **1** *Fill source:* **Native material**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Some localized erosion could occur, however, prudent road construction techniques and normal maintenance practices will minimize the amount of erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*
Approximately 2% of the proposal area will be covered with impervious running surface (gravel forest road).

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)
Ground-based harvest activities will be limited to the dry season.
All roads will be constructed to meet or exceed Forest Practices standards and the Habitat Conservation Plan guidelines. Appropriate drainage devices including proper culvert size and placement, drain dips, water bars and ditching, will be used as necessary to reduce surface erosion. In areas adjacent to constructed roads where soil disturbances have occurred, straw mulch, grass seed or other appropriate measure will be used to prevent sediments from being transported. Hauling will be restricted between November 1 and March 31 of any year.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by truck traffic. If slash is burned, it will be burned in adherence to the State's Smoke Management Program.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
Does not apply

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
If slash is burned, it will be burned in adherence to the State's Smoke Management Program.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

Streams:
There are 9 typed water segments on 7 streams associated with this proposal all of which flow into Mundt Creek and then to the east fork of Nookachamps Creek. The letter designations refer to the Forest Practices Map.

Unit 1:
Mundt Creek (type 2) borders 300+ft north of the unit.
Stream A (type 4) borders unit 1 to the south and flows west eventually draining into Mundt Creek.
Stream B (type 5) flows southwest into stream A.
Stream C (type 4) flows west through the unit and into stream A.
Stream D (type 4) flows west through unit 1 and into stream A.
Stream E (type 5) flows west through unit 1 and into stream D.
Stream F (type 5) flows south through the western portion of the unit and into stream D.
Stream G (type 5) flows west through the unit into stream C.

Unit 2:
Stream B (type 5) borders unit 2 to the south and flows west through unit 1.
Stream G (type 5) flows west through the unit into stream C.
Stream H (type 5) borders unit 2 to the north and flows west into stream C.

a) Downstream water bodies:
The east fork of the Nookachamps

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
A,C,D	4	3	100 ft no-harvest buffer
B, E, F, G, H	5	5	30 ft equipment limitation zone
Mundt Creek	2	1	300+ ft no-harvest buffer

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.
All RMZ's were measured from the 100-year flood plain. No channel migration zones were present. The edge of the 100-year floodplain was determined by visually estimating the depth of the water at twice the flow of the ordinary high water mark.

Mundt Creek: The north boundaries of both units were located 300 ft or more from Mundt Creek for slope stability and harvestability reasons, exceeding the RMZ buffer and wind buffer requirements for this stream.

Road construction: Ditchwater will be diverted through relief culverts prior to stream crossing to keep possible sediment out of streams. Exposed soils will be grass seeded.

Ground-based harvest equipment will be excluded from within 30 feet of bankfull width of all Type 5 streams.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

Timber harvest: Trees will be felled and yarded away from all typed streams where operationally feasible. Full suspension cable yarding will be allowed over type-5 streams. Where full suspension is not possible, log cribbing will be laid down in the stream channel to protect its banks. This cribbing will be removed following operations.
Ground-based harvesting will be limited to the dry season.

Road construction: Ditchwater will be diverted through relief culverts prior to stream crossing to keep possible sediment out of streams. Exposed soils will be grass seeded.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
No material will be placed in, or dredged from, surface water or wetlands during the course of this proposal.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☐*No* ☒*Yes, description:*
Potential short term diversion may be necessary when installing culvert in the type 4 stream. The installation will follow any HPA that is issued.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) *Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?*
Yes. In the majority of the proposal area (slopes <65%), erosion and mass wasting potential are rated in the low to medium ranges. On steeper slopes within the sub-basin (>65%), mass wasting potential is rated as high. However the proposal area does not contain any such slopes. Based on field observations there is the possibility of some surface erosion but the potential for material to enter surface water is very low due to the location of sale boundaries which exclude steep slopes adjacent to streams.

8) *Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?*
☒*No* ☐*Yes, describe changes and possible causes:*

9) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*
☒*No* ☐*Yes, explain:*
Please refer to B.1.d.5. and B.1.h. for measures that will protect water quality.

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*
Nookachamps WAU: 4.6 road miles per square mile.
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not,* ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☐*No* ☒*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):
Nookachamps WAU: 15% total acres in ROS
Nookachamps Sub-Basin 6: 36% total acres in ROS

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*
Within Nookachamps Sub-Basin 6, 98% of DNR managed acres within the ROS zone are rated as hydrologically mature. It is not known how many private acres in the Sub Basin are hydrologically mature. These figures are based on the latest information available prior to the proposal's activities.

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☒*No* ☐*Yes, describe observations:*
None Known

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*
Because less than 1/3 of the sub-basin areas are in SROS, the sub-basins will not be managed for rain on snow. Proposed activities are not expected to contribute to peak flows.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☐*No* ☒*Yes, possible impacts:*
Mundt Creek and the East fork of the Nookachamps could be negatively affected by changes in surface water amounts. However, due to the protective measures cited in B-3-a-1-c and B-3-a-2, significant changes in water amount, quality or movement should not occur.

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*
Please refer to B-1-h, B-3-a-1-b, B-3-a-1-c, and B-3-a-2.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.
No ground water will be withdrawn. Water discharges will include channeled water through ditches and culverts. As this water empties out onto the forest floor, it will increase surface saturation in localized areas, but is not expected to increase ground water levels over a significant portion of the proposal area.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
Insignificant amounts of oil and other lubricants could be discharged inadvertently as a result of heavy equipment use. No lubricants will be disposed of onsite.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☐*No* ☒*Yes, describe:*
A Skagit County PUD water intake is located on Mundt Creek approximately 300 ft north of Unit 1. Because the unit is further than the required buffer width from the stream, it is believed that this proposal will not affect groundwater amounts, timing, or movements into Mundt Creek. A very minor amount of sale acreage, if any, is tributary to the PUD intake.
Residential wells exist along Mundt Creek and the East fork of Nookachamps Creek. These are more than 1 mile downstream of the proposal.

a) *Note protection measures, if any.*
Please refer to B-1-h, B-3-a-1-b, B-3-a-1-c, and B-3-a-2.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
Runoff from the road surfaces will be collected in ditches and diverted to stable areas on the forest floor through the uses of ditches, culverts, and energy dissipaters.

2) Could waste materials enter ground or surface waters? If so, generally describe.
Some logging slash may enter non-fish bearing seasonal streams. Insignificant amounts of oil and other lubricants could be discharged inadvertently as a result of heavy equipment use.

a) *Note protection measures, if any.*
Stream buffers, use of culverts, ditches, and energy dissipaters, equipment limitations along non-fish, seasonal streams, directional felling away from streams. No lubricants will be disposed of on site.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)
Existing and constructed ditches, cross drain culverts, drain dips, and water bars will be used to control runoff. Straw, grass seeding, or other appropriate methods will be used on any soil exposed during the course of this proposal in order to prevent sediment movement. Roads and landings will be crowned to avoid water accumulations. Any ground-based yarding that may occur will be limited to the dry season and to areas with slopes less than 25%. Falling and yarding away from all seasonal streams will be applied when feasible. All activities associated with this proposal will meet or exceed Forest Practices standards and the Habitat Conservation Plan.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☒*cottonwood,* ☐*western larch,* ☒*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☐*other:*
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☐*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*
All conifer and hardwood will be removed except the 7% marked for leave-tree retention. Shrubs and herbaceous plants will be disturbed in harvest areas.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")
Unit 1 is bounded to the north partially by 3-year-old private stand, and partially by mature70+ year old mixed conifer along Mundt Creek. To the east the unit is bordered by 4-year old, DNR managed conifer stand. To the south the unit is bordered by mature 70+-year-old mixed conifer managed by DNR. To the west is a 13-year-old, DNR managed conifer stand.

Unit 2 is bounded on all sides by DNR managed, mature 70+ year old mixed conifer.

2) Retention tree plan:
A total of 854 wildlife trees and green retention trees will be retained (an average of 10 trees per acre.) This represents seven percent of the pre-harvest stem count greater than 12 inches in diameter. Trees selected for retention are either in the dominant or co-dominant diameter class, contain structural characteristics important to wildlife, and/or wind firmness.

c. List threatened or endangered *plant* species known to be on or near the site.
None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
Wildlife and green retention trees will be left on site in a clumping and scattered pattern. Native conifer trees will be planted upon completion of the proposal. Soil exposed due to road construction will be grass seeded.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☒songbirds, ☒*pigeon,* ☐other:
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☒*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*
There are cliffs in the vicinity but not within the proposal.

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*
This proposal site is not known to support any threatened or endangered species.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*
All of Washington State is considered part of the Pacific Flyway. No impacts are anticipated as a result of this proposal being completed.

d. Proposed measures to preserve or enhance wildlife, if any:
A total of 7% of the trees per acre over 12" dbh will be left, including up to 3 snags per acre if available. Trees left will consist of dominant, co-dominant, and structurally unique trees. Leave trees will be scattered and grouped. Where consistent with safety requirements, leave trees will be left so as to compliment and buffer unique snags. The wildlife and green tree retention plan was established with the aid of the Region Biologist.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
Does not apply

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
Does not apply

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
Does not apply

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.
There is minimal hazard due to heavy equipment operations. There is a potential fire hazard if operating in moderate fire weather conditions during the summer.

1) Describe special emergency services that might be required.
In the event of a fire, wild land fire services may be required.

2) Proposed measures to reduce or control environmental health hazards, if any:
Timber harvest operators are required to have water trailers on site during fire season.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
None

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.
Noise from road construction and harvest activity will be present in the immediate vicinity of this proposal during the course of operations. Noise from log hauling will be present along the haul routes during the course of operations.

3) Proposed measures to reduce or control noise impacts, if any:
None

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*
Forest management (timber production).

b. Has the site been used for agriculture? If so, describe.
No

c. Describe any structures on the site.
Does not apply

d. Will any structures be demolished? If so, what?
Does not apply

e. What is the current zoning classification of the site?
Commercial forestland.

f. What is the current comprehensive plan designation of the site?
Does not apply

g. If applicable, what is the current shoreline master program designation of the site?
Does not apply

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
No

i. Approximately how many people would reside or work in the completed project?
None

j. Approximately how many people would the completed project displace?
None

k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
The design of this project is consistent with current comprehensive plans and zoning regulations.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply

c. Proposed measures to reduce or control housing impacts, if any:
Does not apply

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?
Does not apply

b. What views in the immediate vicinity would be altered or obstructed?
The proposal is visible from both Hwy 9 and I-5.

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☒*No* ☐*Yes, viewing location:*

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☐*No* ☒*Yes, scenic corridor name:*
The proposal is visible from both Hwy 9 and I-5.

3) How will this proposal affect any views described in 1) or 2) above?
This proposal is in the background of the viewable area from both I-5 (8+ miles away) and Hwy 9 (4 miles away).

c. Proposed measures to reduce or control aesthetic impacts, if any:
Scattered and clumped leave trees will break up the appearance of harvested areas. Planting the proposal area within 2 years of harvest with conifer seedlings will help shorten the time period that the proposal will appear in an un-forested condition.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Does not apply

b. Could light or glare from the finished project be a safety hazard or interfere with views?
No

c. What existing off-site sources of light or glare may affect your proposal?
Does not apply

d. Proposed measures to reduce or control light and glare impacts, if any:
None

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
There is informal hiking, horseback riding, and hunting in the immediate vicinity.

b. Would the proposed project displace any existing recreational uses? If so, describe:
No, only during the operational period will there be any potential for displacing recreational users.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
None

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
None

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
None

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)
None

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
Janicki Road, Old Day Creek Road, and State Highway 9.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?
There are no indications that this proposal will contribute to such a problem. The proposal is consistent with historical use of the area.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
Does not apply

c. How many parking spaces would the completed project have? How many would the project eliminate?
Does not apply

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
Does not apply

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
No

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
0.04 trips per day (approximately once a month) for management purposes, for the first 5-10 years after the completion of the proposal.

g. Proposed measures to reduce or control transportation impacts, if any:
Safe operation of vehicles will be encouraged.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
No

b. Proposed measures to reduce or control direct impacts on public services, if any.
Access will be restricted as needed during periods of extreme fire danger.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
Does not apply

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
Does not apply

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: _____ Starbird Unit Forester, Date: 8-13-04
Title

Reviewed by: _____ Cascade Dist Mgr. , Date: 8/2/04
Title

Approved by: _____ for Candace Johnson SCA, Date: 12/2/04
Title